

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTONCLASSIFICATION OF THE BUTTERFLIES, WITH
THE ALLOCATION OF THE GENERA OCCURRING
IN NORTH AMERICA NORTH OF MEXICO

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At the present time there is no classification of the Rhopalocera as a whole available for students of the group. The question of the interrelationships within the various subdivisions is more or less unsettled, and the arrangement of the genera in one family is commonly at variance with that proposed by another author for another family. This is especially true in regard to the relative weight to be given to the supergeneric categories. It has seemed worth while, therefore, to present the following classification of the Rhopalocera in which all the groups are included, and in which the interrelationships of the subfamilies and tribes within each family are comparable with those in other families, at least in terminology.

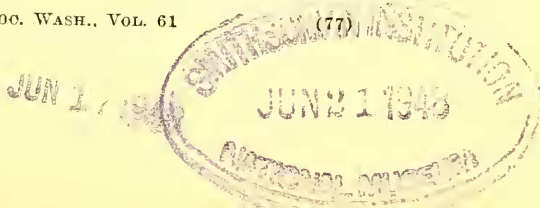
This classification is admittedly tentative, for in many groups much work remains to be done in regard to the larval, pupal, genitalic and other characters before any definite appraisal of their systematic position is possible.

In the following pages the classification of the Hesperioidea follows the generally accepted plan. The classification of the Riodinidae is that of Dr. H. Stichel. The grouping of the genera in the family Pieridae is that of Dr. Alexander B. Klots, and in the family Danaidae essentially that of Dr. William T. M. Forbes.

In the arrangement of the genera in the family Papilionidae I have followed Dr. E. B. Ford. But the genus *Lamproptera* (*Leptocircus*) is regarded as sufficiently distinct from *Graphium* and its allies to justify its recognition as a distinct tribe, and the genera *Troides*, *Ornithoptera*, *Schoenbergia*, and *Trogonoptera* appear to differ sufficiently from the other genera of Aristolochia-feeding swallowtails to warrant their inclusion in a special subtribe.

The treatment of the genera of the Nymphalides adopted herein was explained in a recent paper (Proc. Ent. Soc. Washington, vol. 49, No. 6, June 1947, pp. 148, 149; No. 7, October 1947, p. 192). This should, perhaps be further clarified by an additional note. The Satyridae, exclusive of the Pronophilinae, Elymniinae, and Pierellinae, appear to fall into two groups. In one group, one or more of the veins of the fore wings are

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abruptly swollen at the base, the hind wings are evenly rounded, and the larvae feed on the smaller grasses. This group is regarded as constituting the subfamily Satyrinae. In the other group none of the veins of the fore wings are abruptly swollen at the base, though they may be gradually thickened, the hind wings are usually more or less conspicuously toothed, and the larvae feed mostly on the sedges or on the coarser grasses such as *Hystrix*, *Arundinaria*, bamboo, sugar-cane, and maize. This group is considered as constituting the subfamily Lethinae (Enodiinae).

The disposition of the genera in the family Lycaenidae is to be regarded as purely tentative. It was drawn up in consultation with Dr. William T. M. Forbes and Mr. William D. Field.

In the preparation of this classification I have been assisted by many co-workers. Chief among these has been my colleague Mr. William D. Field to whom I am deeply indebted for many pertinent suggestions. Dr. William T. M. Forbes was also most generous in giving suggestions and advice. Mr. Ernest L. Bell, Mr. R. C. Williams, and Professor A. W. Lindsey were so kind as to review the arrangement of the Hesperioidea. Dr. E. B. Ford discussed with me the classification of the Papilionidae, and Dr. Norman B. Tindale and I reviewed certain features in the interrelationships of the nymphalids.

CLASSIFICATION OF THE RHOPALOCERA, WITH THE
ALLOCATION OF THE GENERA OCCURRING IN NORTH
AMERICA NORTH OF MEXICO

Superfamily PAPILIONOIDEA

Group NYMPHALIDES

Family Satyridae

Subfamily Satyrinae (*Coenonympha*, *Eumenis*, *Minois*, *Oeneis*,
Erebia, *Neonympha*, *Megisto*, *Paramacera*)

Subfamily Lethinae (Enodiinae) (*Lethe*, *Satyrodes*)

Subfamily Pronophilinae (*Gyrocheilus*)

Subfamily Elymniinae

Subfamily Pierellinae

Family Brassolidae

Subfamily Brassolinae

Subfamily Caliginae

Subfamily Biinae

Family Morphidae

Subfamily Morphinae

Subfamily Amathusiinae

Tribe Taenarini

Tribe Amathusiini

Tribe Hyantini

Tribe Discophorini

Family Apaturidae

Subfamily Charaxinae (*Anaea*)

Subfamily Aparturinae (*Asterocampa*)

Family Nymphalidae

Subfamily Marpesiinae (*Megalura*, *Marpesia*)

Subfamily Nymphalinae

Tribe Nymphalini (*Polygona, Nymphalis, Vanessa, Junonia, Anartia, Hypanartia, Victorina, Hypolimnas*)

Tribe Melitaeini (*Euphydryas, Melitaea, Chlosyne, Phyciodes, Athanassa, Eresia, Microtia*)

Subfamily Ergolinae

Tribe Catagrammini (*Diaethria*)

Tribe Ergolini (*Cystineura, Eunica*)

Tribe Epicalini (*Myscelia*)

Tribe Ageroniini (*Ageronia*)

Tribe Gynaeciini (*Historis, Smyrna*)

Family Argynniidae

Subfamily Limenitinae

Tribe Euthaliini

Tribe Limenitini (*Limenitis, Heterochroa, Dynamine*)

Subfamily Argynninae

Tribe Cynthiini (*Euptoeta*)

Tribe Argynnini (*Speyeria, Clossiana, Boloria*)

Subfamily Heliconiinae

Tribe Heliconiini (*Heliconius*)

Tribe Dionini (*Agraulis, Dryas*)

Tribe Cethosiini

Subfamily Acraeinae

Family Calinagidae

Family Danaidae

Subfamily Danainae

Tribe Danaini (*Danaus*)

Tribe Lycoreini (*Lycorea*)

Tribe Anellini (*Clothildini*)

Tribe Euploeini

Subfamily Tellervinae

Subfamily Ithomiinae

Tribe Melinaeini

Tribe Thyridiini

Tribe Ithomiini

Group LYCAENAE

Family Libytheidae (*Libytheana*)

Family Riodinidae

Subfamily Nemeobiinae

Tribe Nemeobiini

Subtribe Nemeobiina

Subtribe Zemerina

Subtribe Abisarina

Tribe Euselasiini

Tribe Corrachini

Tribe Helicopini

Subfamily Riodininae

Tribe Eurybiini

Subtribe Semomesiina

Subtribe Eurybiina

Tribe Ancylyurini

Subtribe Ancylyurina

Subtribe Bacotidina (*Caria, Calephelis, Lasaia*)

- Subtribe Musenina
 - Subtribe Charitina
 - Subtribe Emesina (*Emesis, Apodemia*)
 - Subtribe Nymphidiina
 - Tribe Stalactini
 - Family Lycaenidae
 - Subfamily Liphyrinae
 - Subfamily Gerydinae
 - Subfamily Spalginae (*Feniseca*)
 - Subfamily Lipteninae
 - Subfamily Curetinae
 - Subfamily Poritiinae
 - Subfamily Ogyrinae
 - Subfamily Amblypodiinae
 - Subfamily Lycaeninae
 - Tribe Theclini
 - Subtribe Theclina (*Zephyrus, Hypaurotis, Atlides, Strymon, Thecla, Calycopis, Callipsyche, Eupsyche, Satyrium, Mitoura, Incisalia, Callophrys, Erora*)
 - Subtribe Eumaeina (*Eumaeus*)
 - Tribe Lycaenini
 - Subtribe Lycaenina (*Tharsalea, Lycaena*)
 - Subtribe Plebejina (*Leptotes, Brephidium, Zizera, Hemiarigus, Everes, Plebejus, Philotes, Phaedrotes, Glaucopsyche, Cyaniris*)
- Group PAPILIONES
 - Family Pieridae
 - Subfamily Pseudopontiinae
 - Subfamily Dismorphiinae
 - Subfamily Pierinae
 - Tribe Pierini (*Neophasia, Appias, Pieris, Ascia*)
 - Tribe Rhodocerini (*Colias, Zerene, Anteos, Phoebis, Aphrissa, Kricogonia, Eurema, Nathalis*)
 - Tribe Euchloini (*Anthocaris, Euchloë*)
 - Family Papilionidae
 - Subfamily Papilioninae
 - Tribe Lampropterini (*Leptocircini*)
 - Tribe Graphiini (*Iphiclides*)
 - Tribe Teinopalpini
 - Tribe Papilionini (*Papilio*)
 - Tribe Troidini
 - Subtribe Battina (*Battus*)
 - Subtribe Troidina
 - Tribe Cressidini (*Eurycini*)
 - Subfamily Zerynthiinae
 - Subfamily Parnassiinae (*Parnassius*)
 - Subfamily Baroniinae
- Superfamily HESPERIOIDEA
 - Family Hesperiiidae
 - Subfamily Pyrrhopyginae (*Apyrothrix*)
 - Subfamily Pyrginae

- Tribe Celaenorrhini (*Pyrgus*, *Heliopetes*, *Antigonus*, *Celotes*,
Pholisora, *Staphylus*, *Achylodes*, *Xenophanes*, *Ephyriades*,
Chiomara, *Erynnis*, *Timocharis*, *Grais*)
- Tribe Eudamini (*Phocides*, *Nascus*, *Polygonus*, *Proteides*,
Urbanus, *Chiodes*, *Codatractus*, *Telegonus*, *Zestusa*, *Achalarus*,
Cecropterus, *Thorybes*, *Cabares*, *Cogia*, *Caicella*)
- Subfamily Hesperinae
 - Tribe Heteropterini (*Pamphilida*, *Butleria*)
 - Tribe Adopaeini (*Aneyloxypha*, *Oarisma*, *Thymelicus*, *Copaeodes*)
 - Tribe Hesperini (*Pseudocopaeodes*, *Yvretta*, *Hesperia*, *Hylephila*,
Atalopedes, *Ochloides*, *Polites*, *Wallengrenia*, *Poanes*,
Problema, *Atrytone*, *Atrytonopsis*, *Oligoria*, *Lerema*, *Pheimides*,
Amblyscirtes, *Lerodea*)
 - Tribe Calpodini (*Thespiens*, *Calpodes*, *Panoquina*)
- Subfamily Trapezitinae
- Subfamily Ismeninae
- Subfamily Eusechemoninae
- Family Megathymidae (*Megathymus*)